

Illinois
Ambient Air Monitoring
2022 Network Plan



Illinois Environmental Protection Agency
Bureau of Air
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Acronyms

AQI	Air Quality Index
AQS	Air Quality System
BAM	Beta Attenuation Monitor
CAA	Clean Air Act
CASTNET	Clean Air Status and Trends Network
CCDES	Cook County Department of Environment and Sustainability
CFR	Code of Federal Regulations
CO	Carbon Monoxide
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GECC	Gateway Energy & Coke Company
IEPA or Illinois EPA	Illinois Environmental Protection Agency
IMPROVE	Interagency Monitoring of Protected Visual Environments
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multi-pollutant station
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NO _y	Total Reactive Nitrogen Oxides
NPS	National Park Service
O ₃	Ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	Lead
PM _{2.5}	Particulate matter with a diameter less than or equal to 2.5 micrometers
PM ₁₀	Particulate matter with a diameter less than or equal to 10 micrometers
PM _{10-2.5}	Particulate matter with a diameter less than or equal to 10 micrometers and greater than or equal to 2.5 micrometers
ppb	Parts per billion
ppm	Parts per million
PWEI	Population Weighted Emissions Index
QA	Quality Assurance
SASS	Speciation Air Sampling System
SLAMS	State or Local Air Monitoring Station
SO ₂	Sulfur Dioxide
SPM	Special Purpose Monitor
STN	Speciation Trends Network
SWS	State Water Survey
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UV	Ultraviolet
VOC	Volatile Organic Compounds

Introduction

In 1970, Congress enacted the Clean Air Act (CAA), empowering the United States Environmental Protection Agency (USEPA) to develop and implement National Ambient Air Quality Standards (NAAQS) for pollutants shown to threaten human health.

NAAQS exist for six criteria pollutants – carbon monoxide (CO), ozone (O₃), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter with a diameter less than or equal to 10 micrometers (PM₁₀), and fine particulate matter (PM_{2.5}). There are primary and secondary NAAQS. Primary standards protect public health, whereas secondary standards protect public welfare including the environment.

A predominant goal of the air monitors within Illinois' network is to collect data with which to assess compliance with the NAAQS. A listing of these NAAQS calculations and contributions can be found at <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

Illinois has designed its ambient air monitoring network to provide timely air pollution data to the public, support compliance with ambient air quality standards and emissions strategy development, and support air pollution research studies. Data gathered from the Illinois EPA's monitoring network is used to produce a daily Air Quality Index (AQI) report, compile daily air quality forecast reports, support short- and long-term health risk assessments, identify localized health concerns, and track long-term trends in air quality that could potentially threaten Illinois citizen's quality of life.

The Illinois air monitoring network includes monitors for the seven criteria pollutants: CO, O₃, Pb, NO₂, SO₂, PM₁₀, and PM_{2.5}. The Illinois air monitoring network meets or, in most cases, exceeds the applicable minimum network requirements.

Monitor siting takes into consideration: peak (the highest concentration of pollution in a given area), population (presence of pollutants in areas with high population densities), source (pollution resulting from significant sources or source categories), background (general pollutant levels), and transport (extent of regional pollutant transport between populated areas). Federal regulations prescribe requirements for monitor and probe siting to ensure that the ambient air quality data is accurately representative. The criteria for the placement and operation of each monitor and probe vary. Site surveys ensure that each requirement is satisfied.

Federal regulations require each State to submit to USEPA an air monitoring network plan annually for the prospective year. Additionally, a five-year network assessment must be completed by USEPA Region 5 monitoring organizations. The last five-year network assessment was completed in 2020 and found the criteria pollutant monitoring network was adequate in meeting USEPA's minimum criteria. The next network assessment will be completed in 2025. The annual network plans take into consideration findings of these assessments. The annual network plan provides a description of the monitoring network for each criteria pollutant including proposed changes. The air monitoring network plan is subject to public review and comment prior to its submission to the USEPA.

Monitoring Designations

The following designations describe the various types of monitors at the sites within Illinois' air monitoring network:

- **NCore** - National Core multi-pollutant monitoring station. Illinois is required by federal regulations to operate one NCore site, which includes monitors for CO, nitric oxide/reactive nitrogen (NO/NO_y), SO₂, O₃, PM₁₀, speciated PM_{2.5}, PM_{2.5}, PM_{10-2.5}, wind speed, wind direction, relative humidity, and ambient temperature. Illinois operates an NCore site in Northbrook and provides support for the federal rural NCore site located in Bondville measuring PM_{2.5}.
- **Near-road** - Placed near busy roadways, near-road sites measure hourly concentrations of NO₂ and sometimes CO or PM_{2.5} in urban areas. Illinois EPA operates two near-road locations, one in Chicago and one in Lansing. The Lansing near-road location began operating off the Kingery Expressway on March 1, 2019. The Chicago near-road location, along the Kennedy Expressway, began operating July 26, 2019.
- **PAMS** - Photochemical Assessment Monitoring Station. In addition to monitoring of criteria pollutants, Illinois also participates in a regional Photochemical Assessment Monitoring Station (PAMS) network in the Chicago area that is part of the USEPA approved "Alternate Plan for the Regional Lake Michigan PAMS Network." This regional PAMS network focuses on both the Milwaukee and Chicago areas that are classified as ozone nonattainment areas. These sites are dedicated to obtaining more information about ozone and its precursors. The Illinois sites participating in the 2022 regional PAMS network will include enhanced monitoring in Schiller Park as well as regulatorily-required monitoring in Northbrook. Illinois' regional PAMS sites will collect and monitor some or all of the following: speciated volatile organic compounds (VOCs), carbonyls, NO₂, NO/NO_y, O₃, CO, and meteorological data in order to monitor potential threats of nonattainment.
- **SLAMS** - State or Local Ambient Monitoring Station. SLAMS monitoring is for comparison to the NAAQS.
- **SPM** - Special Purpose Monitor. The monitors in this category are included in the Agency network but do not apply toward the determination of area NAAQS compliance.

Siting and operation, including collocation requirements, of each monitor meets the requirements of Part 58 Appendices A, B, C, D, and E.

Monitoring Objectives

Monitoring objectives describe the various purposes of the monitors within Illinois' air monitoring network:

- **General Concentration (Background)** - These sites are positioned to measure the general background concentration of pollutants in an area.
- **Highest Concentration (Highest Conc.)** - These sites are located to determine the expected peak concentrations of pollutants in an area.

- **Population** - Located in areas categorized by high population density, these sites are used to determine the typical pollutant concentrations in a specific area.
- **Regional Transport (Transport)** - These sites are located to monitor the level of regional pollution transport from one area to the next.
- **Source-Oriented Source (Source)** - As certain sources contribute to pollution more significantly than others, source-oriented monitors are placed in order to identify the impact of these sources.

Spatial Scale Designations

Sites are not only characterized by type and by the objective, but also according to spatial scale. These scales are used to categorize siting areas and link them with the specific monitoring objectives. Spatial scales as outlined by the USEPA include:

- **Micro** - Concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- **Middle** - Concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
- **Neighborhood** - Concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.
- **Urban** - Overall, citywide conditions with dimensions on the order of four to 50 kilometers.
- **Regional** - A rural area of reasonably homogenous geography without large sources, extending from tens to hundreds of kilometers.

Sampling Methodology

Every ambient air monitor can be classified by a specific method number which identifies sample collection and analysis methods. A comprehensive list of these numbers can be found at: <https://www.epa.gov/aqs/aqs-code-list>.

Federal regulations specify that monitoring methods used for comparison to the NAAQS must be Federal Reference or Equivalent Methods (FRM or FEM). Almost all monitors listed in Illinois' network plan use either FRM or FEM with only a few exceptions. Locations hosting continuous PM_{2.5} samplers solely for AQI purposes are not operated as FRM or FEM.

Quality Assurance

Guidance, policies, and federal regulations establish quality system requirements for data submitted to USEPA. Currently, there are two Primary Quality Assurance Organizations under this network plan – the Illinois EPA and the Cook County Department of Environment and Sustainability (CCDES).

Proposed Network for 2022

Ozone

Illinois is required to operate a minimum of 14 O₃ monitoring sites across the state to meet SLAMS O₃ requirements. NCore requires the operation of one O₃ monitor year-round. Additionally, 19 other O₃ monitors are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, enhanced monitoring, and supporting air pollution research studies. In 2021, Illinois operated 33 O₃ monitors. Additionally, USEPA operated three ozone monitors as part of the Clean Air Status and Trends Network (CASTNET). The number of ozone monitors will not change in 2022.

Discussions are currently ongoing with the property owner of the Maryville ozone monitoring location. The property owner has indicated construction will take place in the area of the current monitoring trailer. It is not yet known whether the property owner will allow the trailer to be moved elsewhere at the current location or whether a new location will need to be established.

Fine Particulate Matter (PM_{2.5})

Illinois is required to operate a minimum of 13 FRM or FEM PM_{2.5} monitors. NCore requires one continuous and one filter based PM_{2.5} monitor. One near-road monitoring site with one FRM or FEM PM_{2.5} monitor is also required. Illinois must operate at least one FRM or FEM PM_{2.5} site monitoring regional background and at least one FRM or FEM PM_{2.5} site to monitor regional transport. Additionally, 18 other PM_{2.5} monitoring sites are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. Depending on funding availability, monitoring site logistics, and manufacturer repair status, additional primary designated PM_{2.5} monitors will be switched from manual filter-based FRM monitors to continuous FEM monitors. As of May 2021, monitors that have FEM continuous units include Bondville, Braidwood, Decatur, Des Plaines, Houston, Jerseyville, Joliet, Knight Prairie, Lansing near-road, Naperville, Normal, Northbrook, Peoria, Rock Island, Rockford, and Springfield. The sites that currently are planned to have FEM monitors between 2021 and 2022 are listed in Table 3.

Illinois EPA initially planned to install new PM_{2.5} FEM monitors at several locations starting in 2020. After delays caused by Covid, Illinois EPA now plans to begin this work in 2021. Some of these new monitors will replace existing FEM monitors while others will replace FRM monitors. Illinois EPA is currently focusing on discontinuing aging Anderson single event monitors (method code 153) as well as removing problematic Thermo 5014i continuous FEM monitors (method code 183). At sites where monitors will be changed, Teledyne T640s (method code 236) will be used. The first round of changes in 2021 includes replacing the Thermo 5014i FEM monitors at Braidwood, Joliet, Knight Prairie, Lansing near-road, Naperville, Northbrook, Rock Island, and Rockford. The Agency is also planning on converting FRM monitors to FEM monitors at Cary and Alton. At Cary, this will allow the removal of the FRM Anderson and BAM monitors. At Alton, the FRM BGIs will be moved to Aurora which will allow aging Andersons to be removed from the network and eliminate collocation requirements for that method. Illinois EPA plans to replace additional Thermo 5014i monitors after the next round of

purchasing in 2021 and 2022. The next round of 2021 and 2022 changes in monitoring methods include switching the Thermo 5014i continuous FEM monitors with Teledyne T640 continuous FEM monitors at the following locations: Decatur, Des Plaines, East St. Louis, Houston, Jerseyville, Normal, Peoria, Springfield, and Wood River. Champaign is also planned to be switched to a T640 when a suitable replacement site is found.

A new monitoring location was established in 2020 in Alton at the Horace Mann Elementary School, 2708 Edwards Street, measuring ozone. This location is approximately two blocks from the existing PM_{2.5} location at the SIU Dental Clinic, 1700 Annex Street. Illinois EPA requested and was approved by USEPA for site relocation and consolidation of the PM_{2.5} monitoring equipment to the new location at Horace Mann Elementary School.

Due to roof construction at the Northbrook NCore location in 2020, all particulate samplers were moved to a lower level roof at the water plant. The samplers change in location was approximately 80 feet to the northeast from the former location.

In 2021, 34 PM_{2.5} sites were operating in Illinois. In 2022, the number of PM_{2.5} sites will not change.

Sulfur Dioxide

Illinois is required to operate six SO₂ monitors. One SO₂ monitor is required at each of the Northbrook and Bondville NCore sites to fulfill NCore requirements. The Illinois State Water Survey operates the Bondville SO₂ monitor. Additionally, five SO₂ monitoring sites are operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. SO₂ data requirements established by USEPA require either modeling or monitoring to characterize current air quality in areas with large sources of SO₂ (40 CFR 51 Subpart BB). Tate & Lyle are contracting with Environmental Resources Management, Inc. operating two SO₂ monitors under this rule.

A total of 12 SO₂ monitors were operated in Illinois in 2021. In 2022, the number of SO₂ sites will remain at twelve.

Nitrogen Dioxide

Illinois is required to operate two near-road NO₂ monitors. In addition to area-wide monitors, federal regulations require the Regional Administrator to collaborate with each State in determining the need for additional NO₂ monitoring requirements beyond the minimum, with a primary focus on siting monitors in locations to protect susceptible and vulnerable populations. In Illinois, two NO₂ monitoring sites are designated, East St. Louis and ComEd, as susceptible and vulnerable population monitoring sites. Illinois operates one NO/NO_y monitor in Northbrook. Additionally, the Illinois State Water Survey operates an NO/NO_y monitor at the rural NCore site in Bondville.

During the spring of 2021, Illinois EPA will install a direct measure NO₂ monitor at the NCore site in Northbrook to meet new Photochemical Assessment Monitoring Station requirements. This monitor will be installed before the June 1, 2021, required start date.

In 2021, the monitoring network consisted of eight NO₂ monitoring sites. Two NO/NO_y monitors will continue to be operated by Illinois EPA and the State Water Survey. In 2022, the number of NO₂ sites will remain at eight.

Carbon Monoxide

Illinois must operate one CO monitor in conjunction with one near-road NO₂ monitor. In addition, it must operate one CO monitor at NCore sites, Northbrook and Bondville. (The Illinois State Water Survey operates the Bondville CO monitor at the rural NCore site.) An additional CO monitoring site is operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2021, three CO monitors were in operation. The number of CO monitors will not change in 2022.

Particulate Matter (PM₁₀)

Illinois must operate three PM₁₀ monitors to satisfy MSA requirements. One PM₁₀ monitor must also be operated for NCore purposes. Additionally, Illinois operates one PM_{10-2.5} (PM coarse) monitor at the Northbrook location to fulfill NCore requirements. The National Park Service operates one PM₁₀ monitor at the Bondville NCore location. In 2021, Illinois EPA operated a total of four PM₁₀ monitoring sites. In 2022, Illinois EPA will continue to operate four PM₁₀ monitors and one PM_{10-2.5} monitor.

Lead

Illinois is required to operate source-oriented monitors near facilities emitting 0.5 tons/year of lead that also have maximum lead concentrations in ambient air in excess of 50 percent of the NAAQS unless a waiver for that site has been approved. Lead monitoring waivers are currently in place with USEPA for Kincaid Generation Power Plant, Keystone Steel & Wire Corporation, Sterling Steel Corporation, Gateway Energy and Coke Company, and Gunit Corporation. The waivers were approved by USEPA in 2017 for Kincaid, in 2018 for Keystone Steel, Sterling Steel, and Gunit, and in 2020 for Gateway Energy and Coke Company. Waivers must be renewed every five years. Modeling and/or monitoring results for these facilities demonstrated that they do not have the potential to contribute to a maximum lead concentration greater than 50 percent of the NAAQS.

In 2021, Olin Corporation began operating a special purpose lead monitor in Alton measuring lead concentrations at its facility for a period of at least one year. With the addition of the Alton lead monitor, the number of lead sites will increase from three to four. In 2022, Illinois EPA will continue to operate four lead monitors.

Photochemical Assessment Monitoring

Illinois is required to collect and report additional PAMS measurements at the Northbrook monitoring location by June 1, 2021. At a minimum, Illinois plans to add to the existing PAMS measurements the following items:

Hourly average speciated volatile organic compounds, three eight-hour carbonyls samples on a one-in-three day schedule, true nitrogen dioxide, hourly precipitation, and averaged mixing height. In addition, new solar radiation and ultraviolet radiation sensors will be procured. Illinois plans to run these additional items during the months of June, July, and August.

Table 1: Illinois Monitoring Network by Criteria Pollutant

AQS ID	County	City	Address	Site Description	Owner	CO	NO ₂	NO _y	SO ₂	O ₃	PM ₁₀ / Coarse	PM _{2.5}	Pb
17-001-0007	Adams	Quincy	1301 S. 48th St	John Wood Community College	IEPA					X			
17-019-0006	Champaign	Champaign	904 N. Walnut	Ameren Substation Platform	IEPA							X	
17-019-0007	Champaign	Thomasboro	North Thomas St.	Resident's Building	IEPA					X			
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	State Water Survey Climate Station	SWS	X		X	X				
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	State Water Survey Climate Station	IEPA							X	
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	CASTNET Station	USEPA					X			
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	IMPROVE Station	NPS						PM ₁₀ / Coarse		
17-031-0001	Cook	Alsip	4500 W. 123rd St.	Village Garage	CCDES					X		X	
17-031-0022	Cook	Chicago	3535 E. 114th St	Washington High School	CCDES						X	X	X
17-031-0032	Cook	Chicago	3300 E. Cheltenham Pl.	South Water Filtration Plant	CCDES					X			
17-031-0052	Cook	Chicago	4850 Wilson Ave.	Mayfair Pump Station	CCDES							X	
17-031-0057	Cook	Chicago	1745 N. Springfield Ave.	Springfield Pump Station	CCDES							X	
17-031-0076	Cook	Chicago	7801 Lawndale	Com Ed Maintenance Bldg. Trailer	CCDES		X		X	X		X	
17-031-0110	Cook	Chicago	1241 19th St.	Perez Elementary School	CCDES								X
17-031-1003	Cook	Chicago	6545 W. Hurlbut St.	Taft High School	CCDES					X			
17-031-0119	Cook	Lansing	Kingery Expy & Torrence Ave.	Kingery Near-road #1	IEPA	X	X					X	
17-031-0219	Cook	Chicago	Kennedy Expy & W. Webster Ave.	Kennedy Near-road #2	IEPA		X						
17-031-1016	Cook	Lyons Township	50th St. & Glencoe	Village Hall	IEPA						X	X	

AQS ID	County	City	Address	Site Description	Owner	CO	NO ₂	NO _y	SO ₂	O ₃	PM ₁₀ / Coarse	PM _{2.5}	Pb
17-031-1601	Cook	Lemont	729 Houston	Lemont Trailer	CCDES				X	X			
17-031-3103	Cook	Schiller Park	4743 Mannheim Rd.	Schiller Park Trailer	IEPA		X			X		X	
17-031-3301	Cook	Summit	60th St. & 74th Ave.	Graves Elementary School	CCDES							X	
17-031-4002	Cook	Cicero	1820 S. 51st Ave.	Cicero Trailer	CCDES		X			X			
17-031-4007	Cook	Des Plaines	9511 W. Harrison St.	Regional Office Bldg.	IEPA					X		X	
17-031-4201	Cook	Northbrook	750 Dundee Rd.	Northbrook Water Plant	IEPA	X	X	X	X	X	Coarse	X	
17-031-6005	Cook	Cicero	13th St. & 50th Ave.	Liberty School	CCDES							X	
17-031-7002	Cook	Evanston	531 E. Lincoln	Evanston Water Plant	IEPA					X			
17-043-4002	DuPage	Naperville	400 S. Eagle St.	City Hall	IEPA							X	
17-043-6001	DuPage	Lisle	Route 53	Morton Arboretum	IEPA					X			
17-049-1001	Effingham	Effingham	10421 N. US Hwy. 45	Central Grade School	IEPA					X			
17-065-0002	Hamilton	Knight Prairie Twp	Route 14	Knight Prairie Trailer	IEPA					X		X	
17-083-0117	Jersey	Jerseyville	21965 Maple Summit Rd.	Jerseyville Trailer	IEPA					X		X	
17-085-9991	Jo Daviess	Stockton	10952 E. Parker Rd.	CASTNET Station	USEPA					X			
17-089-0003	Kane	Elgin	258 Lovell St.	McKinley School	IEPA							X	
17-089-0005	Kane	Elgin	665 Dundee Rd.	Larsen Junior High School	IEPA					X			
17-089-0007	Kane	Aurora	1240 N. Highland	Health Department	IEPA							X	
17-097-1007	Lake	Zion	Illinois Beach State Park	Zion Trailer	IEPA					X			
17-099-0007	La Salle	Oglesby	308 Portland Ave.	Oglesby Trailer	IEPA				X				

AQS ID	County	City	Address	Site Description	Owner	CO	NO ₂	NOy	SO ₂	O ₃	PM ₁₀ / Coarse	PM _{2.5}	Pb
17-111-0001	McHenry	Cary	First St. & Three Oaks Rd.	Cary Grove High School	IEPA					X		X	
17-113-2003	McLean	Normal	Main & Gregory	Normal-ISU Physical Plant Trailer	IEPA					X		X	
17-115-0013	Macon	Decatur	2200 N. 22nd St.	Decatur Trailer	IEPA				X	X		X	
17-115-0217	Macon	Decatur	Folk & E. Marietta Sts.	Tate & Lyle Northwest	ERM Inc.				X				
17-115-0317	Macon	Decatur	El Dorado St.	Tate & Lyle Southeast	ERM Inc.				X				
17-117-0002	Macoupin	Nilwood	Heaton & Dubois	Nilwood Trailer	IEPA		X		X	X			
17-119-0120	Madison	Alton	2708 Edwards St.	Horace Mann School	IEPA					X		X	
17-119-0121	Madison	Alton	Powder Mill Rd.	Olin Corporation	IEPA								X
17-119-0010	Madison	Granite City	15th & Madison	Air Products	IEPA								X
17-119-0024	Madison	Granite City	2100 Madison	Gateway Medical Center	IEPA							X	
17-119-1007	Madison	Granite City	23rd. & Madison	Fire Station # 1	IEPA						X	X	
17-119-1009	Madison	Maryville	200 W. Division	Maryville Trailer.	IEPA					X			
17-119-3007	Madison	Wood River	54 N. Walcott	Wood River Water Treatment Plant	IEPA				X	X		X	
17-119-9991	Madison	Highland	5403 State Rd. 160	CASTNET Station	USEPA					X			
17-143-0024	Peoria	Peoria	Hurlburt & MacArthur	Fire Station #8	IEPA					X			
17-143-0037	Peoria	Peoria	613 N.E. Jefferson	City Office Bldg.	IEPA							X	
17-143-1001	Peoria	Peoria Heights	508 E. Glen Ave.	Peoria Heights High School	IEPA					X			
17-157-0001	Randolph	Houston	Hickory Grove & Fallview	Houston Trailer	IEPA					X		X	
17-161-3002	Rock Island	Rock Island	32 Rodman Ave.	Rock Island Arsenal	IEPA					X		X	

AQS ID	County	City	Address	Site Description	Owner	CO	NO ₂	NO _y	SO ₂	O ₃	PM ₁₀ / Coarse	PM _{2.5}	Pb
17-163-0010	St. Clair	East St. Louis	13th & Tudor	ESTL Trailer	IEPA		X		X	X		X	
17-167-0012	Sangamon	Springfield	State Fair Grounds	Agriculture Bldg.	IEPA							X	
17-167-0014	Sangamon	Springfield	Illinois Building	State Fairgrounds Shelter	IEPA					X			
17-179-0004	Tazewell	Pekin	272 Derby	Pekin Fire Station #3	IEPA				X				
17-197-1002	Will	Joliet	Midland & Campbell Sts.	Pershing Elementary School	IEPA							X	
17-197-1011	Will	Braidwood	36400 S. Essex Rd.	Com Ed Training Ctr. Trailer	IEPA					X		X	
17-201-0118	Winnebago	Rockford	204 South 1 st St.	Fire Department Admin. Bldg.	IEPA							X	
17-201-2001	Winnebago	Loves Park	1405 Maple Ave.	Maple Elementary School	IEPA					X			
					IEPA	2	6	1	7	27	3	27	2
					CCDES	0	2	0	2	6	1	7	2
					NPS/SWS	1	0	1	1	0	1	0	0
					ERM Inc.	0	0	0	2	0	0	0	0
					USEPA	0	0	0	0	3	0	0	0
					Total	3	8	2	12	36	5	34	4

Red indicates monitor/site proposed for removal or has been removed, Green indicates monitor/site proposed for installation or has been installed.

Table 2: Ozone Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-001-0007	Quincy	+39.91540937 -91.33586832	Quincy, IL-MO	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-019-0007	Thomasboro	+40.244913 -88.188519	Champaign-Urbana, IL	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	49i	Hourly/Y
17-031-0001	Alsip	+41.6709919 -87.7324569	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-0032	South Water Filtration Plant	+41.75583241 -87.54534967	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	SLAMS	T400	Hourly/S
17-031-0076	Com Ed.	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	Ecotech 187	Hourly/S
17-031-1003	Taft High School	+41.98433233 -87.7920017	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-1601	Lemont	+41.66812034 -87.99056969	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	Ecotech 187	Hourly/S
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Population	Source	Neighborhood	PAMS/SLAMS	49i	Hourly/S
17-031-4002	Cicero	+41.85524313 -87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	Ecotech 187	Hourly/S
17-031-4007	Des Plaines	+42.06028469 -87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	NA	Urban	PAMS/NCORE	49i	Hourly/Y
17-031-7002	Evanston	+42.062053 -87.675254	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	T400	Hourly/S
17-043-6001	Lisle	+41.81304939 -88.0728269	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-049-1001	Effingham	+39.06715932 -88.54893401	Effingham, IL	Population	N/A	Regional	SLAMS	T400	Hourly/S
17-065-0002	Knight Prairie	+38.08215516 -88.6249434	Mt Vernon, IL	Background	N/A	Regional	SLAMS	T400	Hourly/S
17-083-0117	Jerseyville	+39.101439 -90.344494	St Louis, IL-MO	Transport	Population	Regional	SLAMS	T400	Hourly/S
17-085-9991	Stockton	+42.2869 -89.9997	Stockton, IL	Highest Conc.	N/A	Regional	SLAMS	49i	Hourly/S
17-089-0005	Elgin	+42.04914776 -88.27302929	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-097-1007	Zion	+42.4675733 -87.81004705	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Transport	Urban	PAMS/SLAMS	T400	Hourly/S
17-111-0001	Cary	+42.22144166 -88.24220734	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-113-2003	Normal	+40.51873537 -88.99689571	Bloomington-Normal, IL	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-115-0013	Decatur	+39.866933 -88.925452	Decatur, IL	Population	Highest Conc.	Urban	SLAMS	49i	Hourly/S
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Transport	Population	Regional	SLAMS	49i	Hourly/S
17-119-1009	Maryville	+38.72657262 -89.95996251	St Louis, IL-MO	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-119-0120	Alton	+38.901316 -90.146211	St Louis, IL-MO	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL-MO	Population	N/A	Urban	SLAMS	49i	Hourly/S
17-119-9991	Highland	+38.8690 -89.6228	St Louis, IL-MO	Highest Conc.	N/A	Regional	SLAMS	49i	Hourly/S
17-143-0024	Peoria	+40.68742038 -89.60694277	Peoria, IL	Population	N/A	Neighborhood	SLAMS	T400	Hourly/S
17-143-1001	Peoria Heights	+40.74550393 -89.58586902	Peoria, IL	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S
17-157-0001	Houston	+38.17627761 -89.78845862	N/A	Background	N/A	Regional	SLAMS	T400	Hourly/S
17-161-3002	Rock Island	+41.51472697 -90.51735026	Davenport-Moline-Rock Island, IA-IL	Population	Highest Conc.	Neighborhood	SLAMS	T400	Hourly/S
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	49i	Hourly/S
17-167-0014	Springfield	+39.831522 -89.640926	Springfield, IL	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-197-1011	Braidwood	+41.22153707 -88.19096718	Chicago-Naperville-Michigan City, IL-IN-WI	Background	N/A	Regional	PAMS/SLAMS	T400	Hourly/S
17-201-2001	Loves Park	+42.33498222 -89.0377748	Rockford, IL	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S

T400 – Teledyne (method 087); 49i – ThermoScientific (method 047), Ecotech 187 – Ecotech Serinus 10 (method 187)

S = Seasonal – March through October ozone monitoring season

Y = Year-round monitoring

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 2a: Ozone Sites – Illinois

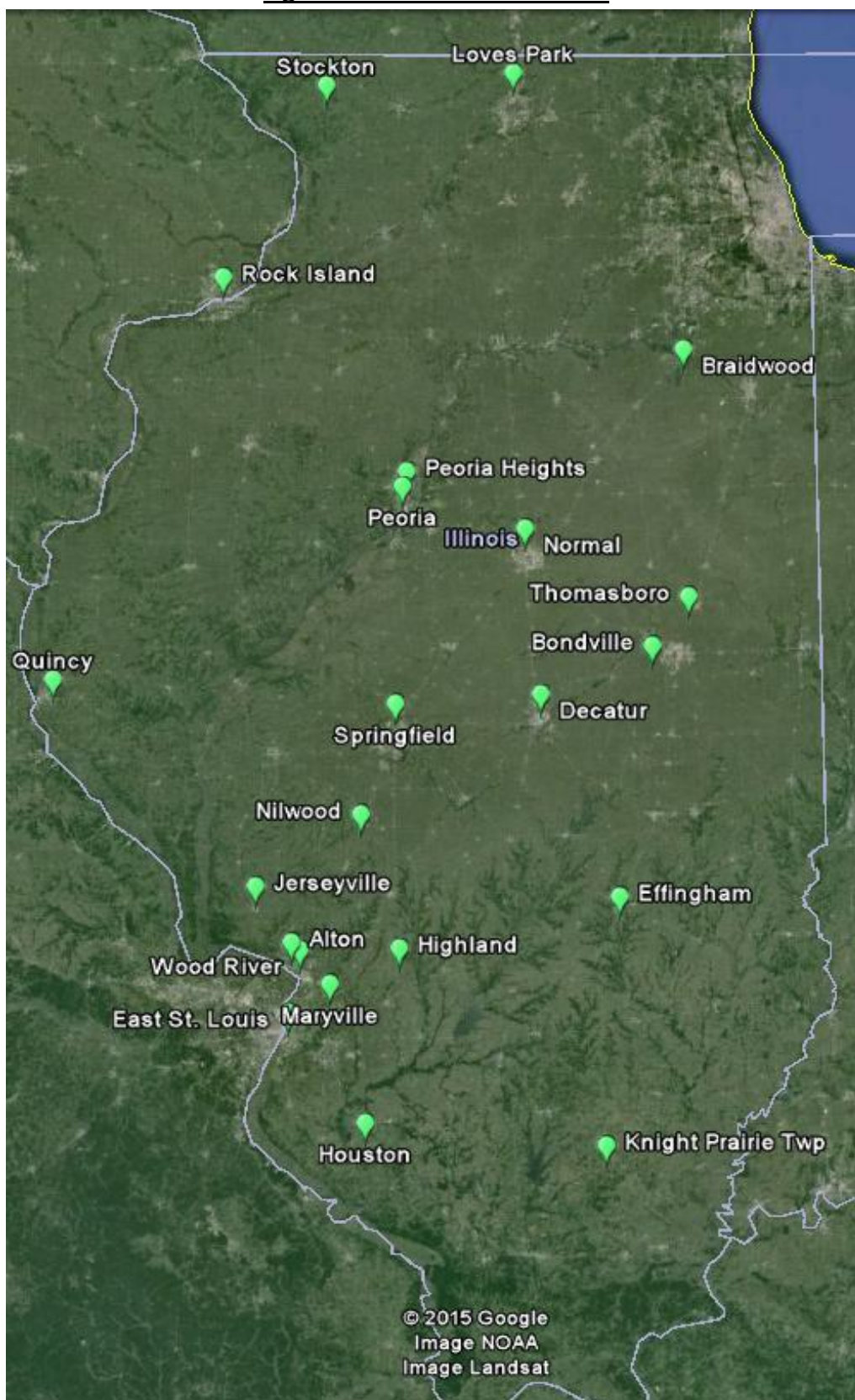


Figure 2b: Ozone Sites – Illinois Chicago Area



Table 3: PM_{2.5} Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-019-0006	Champaign	+40.123883 -88.240550	Champaign- Urbana, IL	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	1/3			
17-019-1001	Bondville	+40.052780 -88.372510	Champaign- Urbana, IL	Transport	Population	Regional	Annual/24	RURAL NCORE	BGI	1/3, Hou rly	FEM Thermo	YES	1/3
17-031-0001	Alsip	+41.6709919 -87.7324569	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hou rly			
17-031-0022	Washington High School	+41.68716544 -87.53931548	Chicago- Naperville- Michigan City, IL-IN-WI	Population	Source	Neighborhood	Annual/24	SLAMS	AS	1/3	AS (1/12 day)		
17-031-0052	Mayfair Pump Station	+41.96548483 -87.74992806	Chicago- Naperville- Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	Annual/24	SLAMS	Met One	1/3			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-031-0057	Springfield Pump Station	+41.912739 -87.722673	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hourly		YES	1/6
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hourly		YES	1/3
17-031-1016	Lyons Township	+41.801180 -87.832349	Chicago-Naperville-Michigan City, IL-IN-WI	Source	Population	Middle	24	SLAMS	THRM	1/3	THRM (1/12 day)		
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Middle	Annual/24	SLAMS	BGI	1/3			
17-031-3301	Summit	+41.78276601 -87.80537679	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS	Met One	1/3	Met One (1/12 day)		
17-031-4007	Des Plaines	+42.06028469 -87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	Hourly			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	URBAN NCORE	FEM Teledyne	1/3, H	THRM (1/12 day)	YES	1/3
17-031-6005	Cicero	+41.86442642 -87.74890238	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	AS, BAM	1/6, H			
17-031-0119	Lansing Kingery near- road #1	+41.578603 -87.557392	Kingery high traffic near- road segment	Highest Conc.	N/A	Micro	Annual/24	SLAMS	FEM Teledyne	H			
17-043-4002	Naperville	+41.77107094 -88.15253365	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-065-0002	Knight Prairie	+38.08215516 -88.6249434	Mt Vernon, IL	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-083-0117	Jerseyville	+39.101439 -90.344494	St Louis, IL- MO	Population	Transport	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-089-0003	Elgin	+42.050403 -88.28001471	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	BGI	1/3			
17-089-0007	Aurora	+41.78471651 -88.32937361	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	BGI	1/6			
17-111-0001	Cary	+42.22144166 -88.24220734	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-113-2003	Normal	+40.51873537 -88.99689571	Bloomington- Normal, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H	FEM Teledyne		
17-115-0013	Decatur	+39.86683389 -88.92559445	Decatur, IL	Population	Source	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-119-0024	Granite City Gateway	+38.7006315 -90.14476267	St Louis, IL- MO	Source	Population	Middle	24	SLAMS, SPM	BGI	1/3		YES	1/6
17-119-1007	Granite City	+38.70453426 -90.13967484	St Louis, IL- MO	Highest Conc.	Population	Neighborhood	Annual/24	SLAMS, SPM	BGI, BAM	1/6, H	BGI (1/12 day)		
17-119-0120	Alton	+38.901316 -90.146211	St Louis, IL- MO	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL- MO	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-143-0037	Peoria	+40.697007 -89.58473722	Peoria, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-157-0001	Houston	+38.17627761 -89.78845862	N/A	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-161-3002	Rock Island	+41.51472697 -90.51735026	Davenport- Moline-Rock Island, IA-IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL- MO	Population	Source	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-167-0012	Springfield	+39.83192087 -89.64416359	Springfield, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-197-1002	Joliet	+41.52688509 -88.11647381	Chicago- Naperville- Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-197-1011	Braidwood	+41.22153707 -88.19096718	Chicago- Naperville- Michigan City, IL-IN-WI	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-201-0118	Rockford	+42.2670002 -89.089170	Rockford, IL	Population	N/A	Middle	Annual/24	SLAMS	FEM Teledyne	H			

AS – Anderson Sequential (method 155); A1 – Anderson Single Event (method 153); Met One - MetOne sequential (method 545); BGI – BGI Instruments (method 142); THRM – ThermoScientific (method 143); FEM Thermo – Federal Equivalent Method Thermo Continuous (method 183); FEM Teledyne – Federal Equivalent Method Teledyne T640 Continuous (method 236); BAM - Beta Attenuation Monitor, Air Quality Index only (method 731), H = Hourly.

Sites that are part of the Chemical Speciation Network are listed in the Chemical Speciation column.

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 3a: PM_{2.5} Sites – Illinois

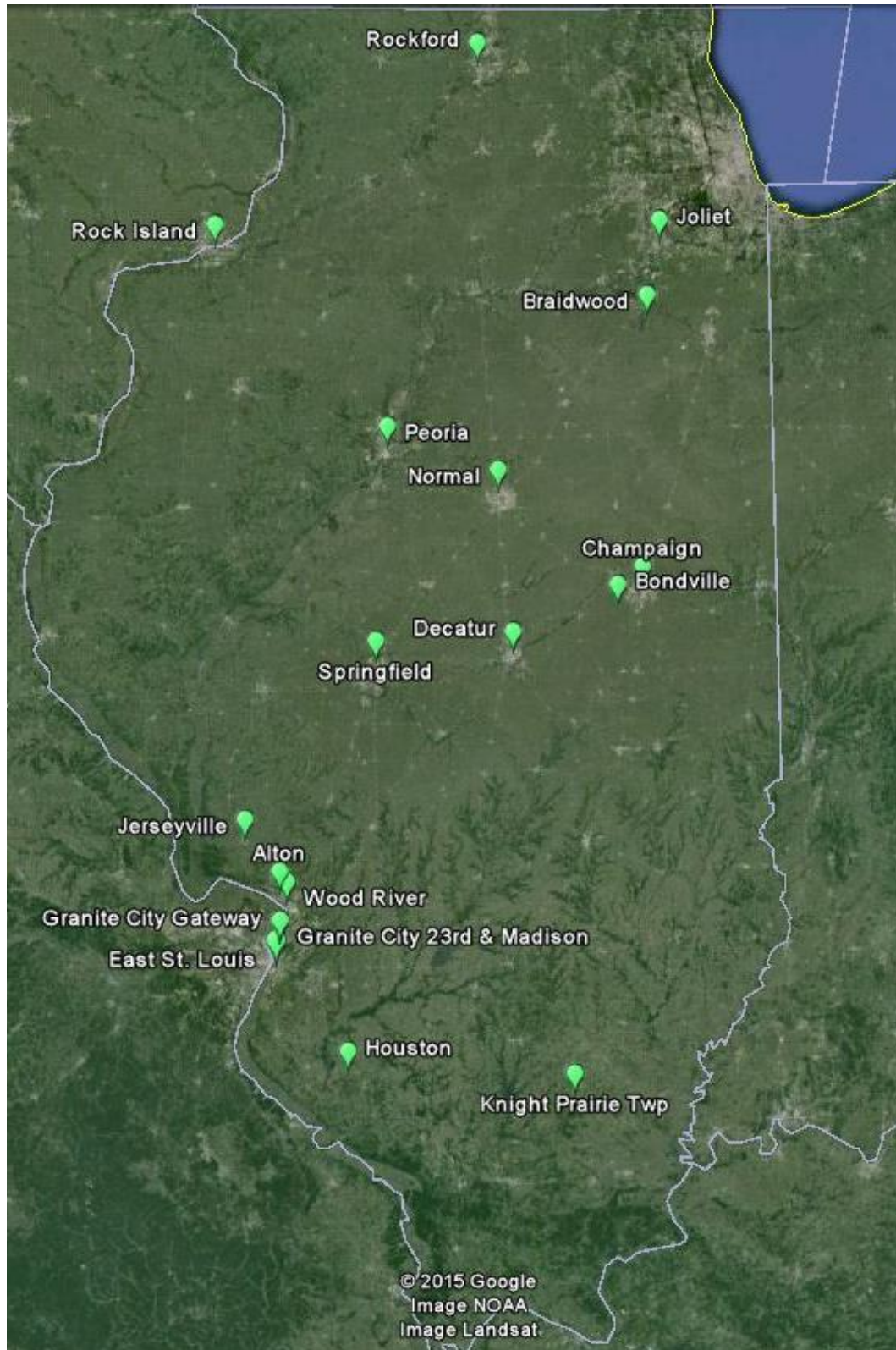


Figure 3b: PM_{2.5} Sites – Illinois Chicago Area

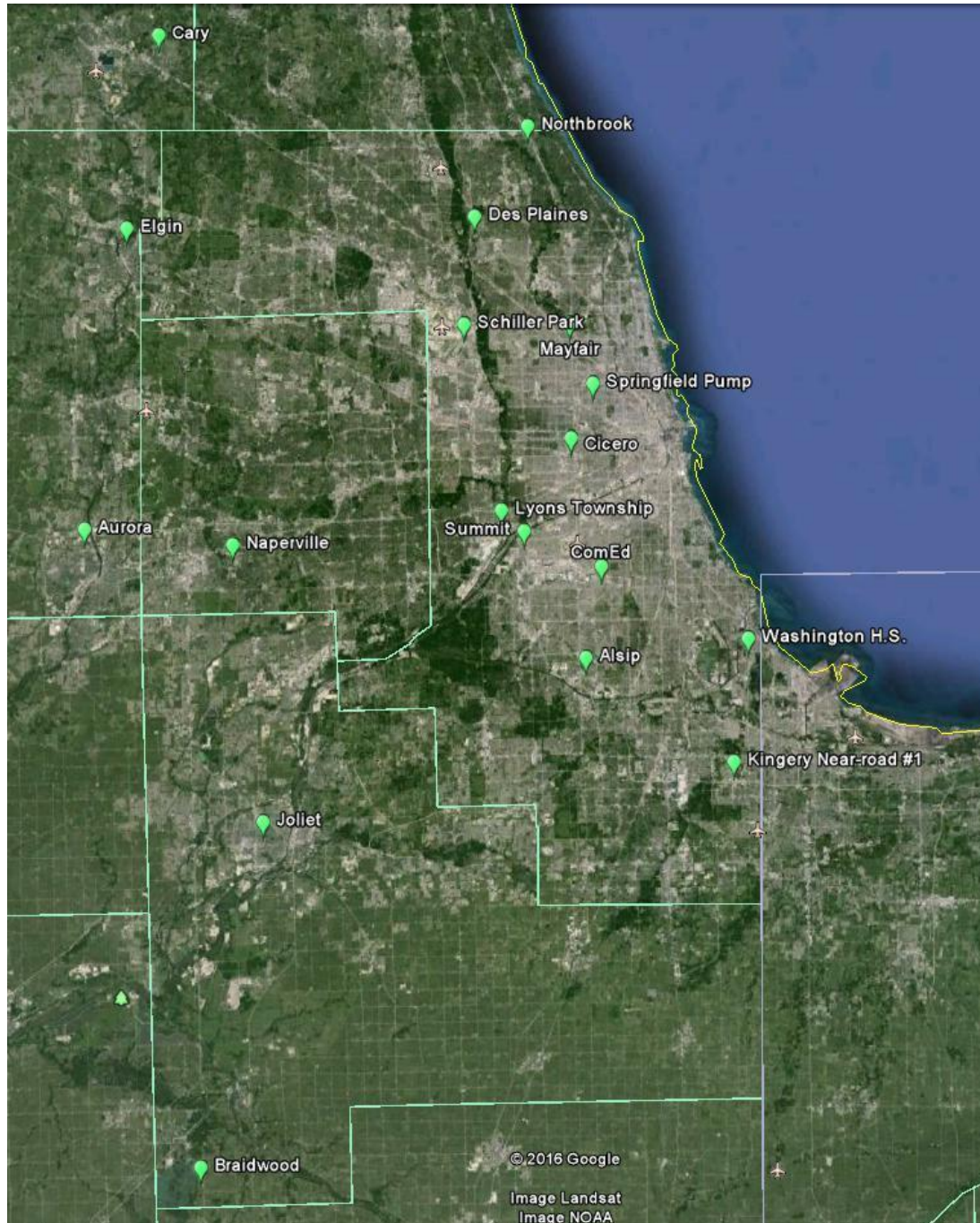


Table 4: SO₂ Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	T100U	Hourly
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T100	Hourly
17-031-1601	Lemont	+41.66812034 -87.99056969	Chicago-Naperville- Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville- Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	T100U	Hourly
17-099-0007	Oglesby	+41.29301454 -89.04942498	Ottawa-Streator, IL	Highest Conc.	Source	Neighborhood	SLAMS	T100	Hourly
17-115-0013	Decatur	+39.86683389 -88.92559445	Decatur, IL	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-115-0217	Tate & Lyle NW	+39.850712 -88.933635	Tate & Lyle	Source	N/A	Neighborhood	SLAMS	43i	Hourly
17-115-0317	Tate & Lyle SE	+39.846856 -88.923323	Tate & Lyle	Source	N/A	Neighborhood	SLAMS	43i	Hourly
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Background	Population	Regional	SLAMS	T100	Hourly
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-179-0004	Pekin	+40.55646017 -89.65402807	Peoria, IL	Highest Conc.	Source	Neighborhood	SLAMS	T100	Hourly

T100 – Teledyne (method 100); T100U – Teledyne Trace Level (method 600); 43i – Thermo Scientific Model 43i (method 060)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 4: SO₂ Sites – Illinois

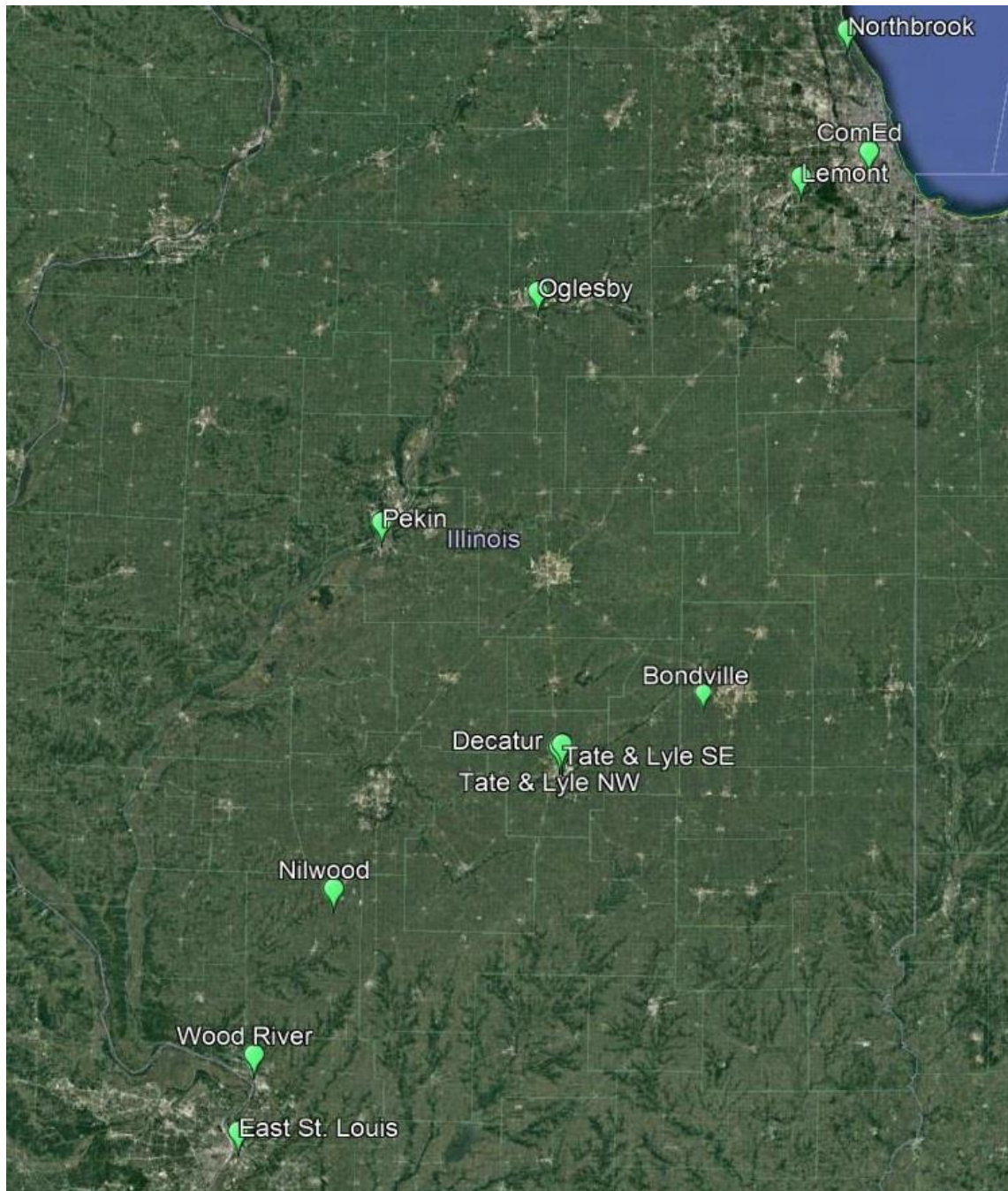


Table 5: NO₂ Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Monitoring Type	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	N/A	Neighborhood	SLAMS	TE	Hourly
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Susceptible Population	Highest Conc.	Source	Middle	PAMS/SLAMS	T500U	Hourly
17-031-4002	Cicero	+41.85524313 -87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	Highest Conc.	Neighborhood	SLAMS	T200	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	N/A	Urban	PAMS/NCORE	T500U	Hourly
17-031-0119	Lansing Kingery near-road #1	+41.578603 -87.557392	Kingery high traffic road segment	Near-road	Highest Conc.	Source	Micro	SLAMS	T500U	Hourly
17-031-0219	Chicago Kennedy near-road #2	+41.920681 -87.674425	Kennedy high traffic road segment	Near-road	Highest Conc.	Source	Micro	SLAMS	T500U	Hourly
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Area-wide	Background	Population	Regional	SPM	T500U	Hourly
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Area-wide	Population	N/A	Neighborhood	SLAMS	T500U	Hourly

T200 – Teledyne (method 099); TE – ThermoScientific (method 074); T500U – Teledyne (method 212)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 5: NO₂ Sites – Illinois

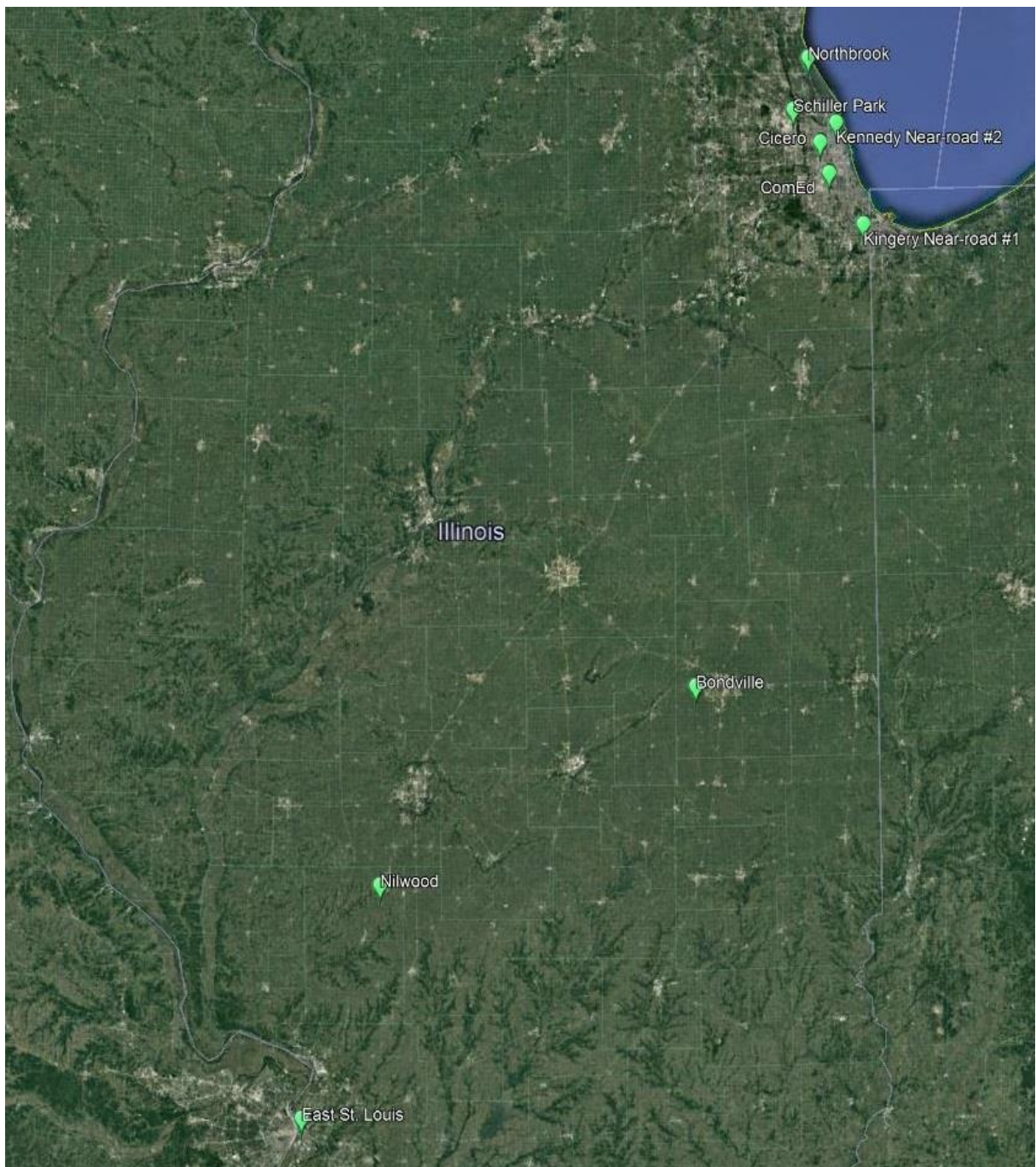


Table 6: CO Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	API 300EU	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville- Michigan City, IL-IN-WI	Population	N/A	Neighborhood	PAMS/NCORE	48iTLE	Hourly
17-031-0119	Lansing Kingery near-road #1	+41.578603 -87.557392	Kingery high traffic road segment	Highest Conc.	Source	Micro	SLAMS	API 300	Hourly

48i – ThermoScientific (method 054); 48iTLE – ThermoScientific Trace Level (method 554); API 300EU – Teledyne Trace Level (method 593) API 300 – Teledyne/API non-trace level (method 093)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 6: CO Sites – Illinois

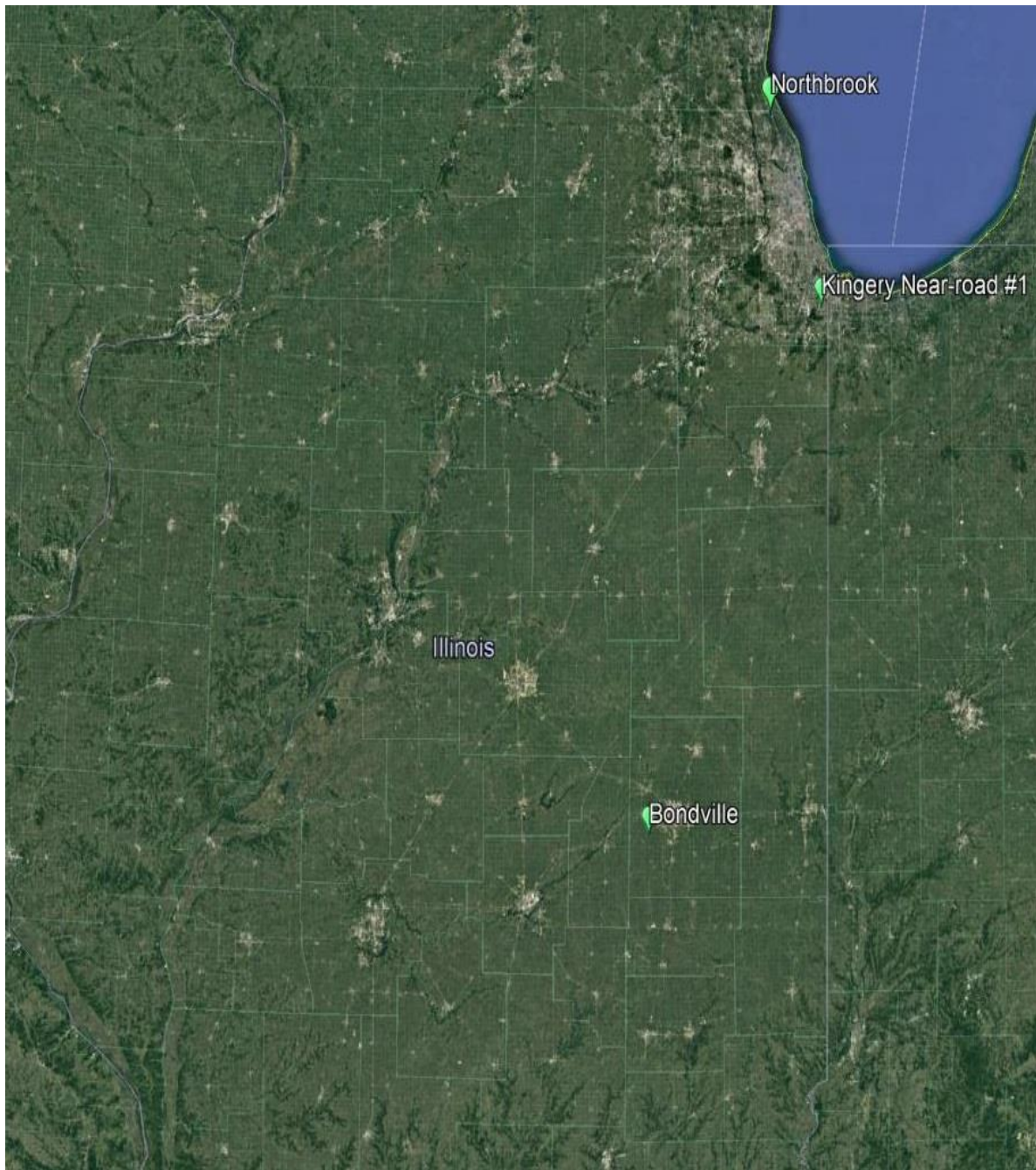


Table 7: PM₁₀ and PM_{10-2.5} Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated
17-031-0022	Washington High School (PM ₁₀)	+41.68716544 -87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Neighborhood	SLAMS	BAM 1020	Hourly	
17-031-1016	Lyons Township (PM ₁₀)	+41.801180 -87.832349	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Middle	SLAMS	BAM 1020	Hourly	
17-031-4201	Northbrook (PM ₁₀)	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	SA/GMW	1/6	YES (1/12 day)
17-031-4201	Northbrook (PM coarse)	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	Thermo Pair	1/3	
17-119-1007	Granite City (PM ₁₀)	+38.70453426 -90.13967484	St Louis, IL-MO	Highest Conc.	Source	Neighborhood	SLAMS	SA/GMW	1/6	

BAM 1020 - Met One 1020 Beta Attenuation Monitor (method 122);

SA/GMW - Sierra Anderson/General Metal Works Hi-Volume Sampler, Standard Conditions (method 063);

Thermo Pair - Thermo Scientific Partisol Model 2000 Sampler Pair for PM coarse (method 175).

The National Park Service operates an additional PM₁₀ monitor in Bondville as part of the IMPROVE network.

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 7: PM₁₀ Sites – Illinois

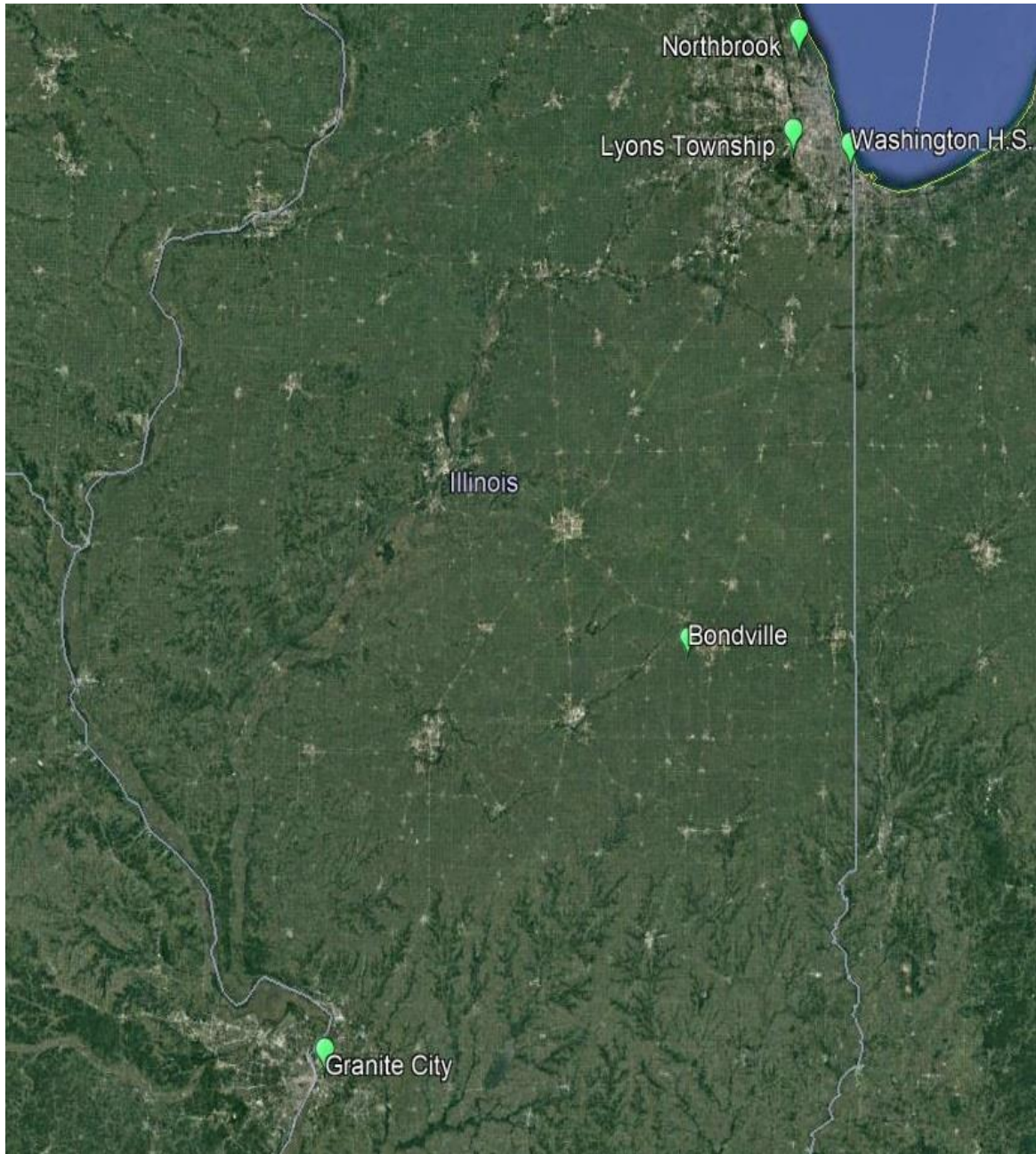


Table 8: Lead Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type (Primary)	Frequency	Collocated
17-031-0022	Washington High School	+41.68716544 -87.53931548	Chicago- Naperville- Michigan City, IL-IN-WI	Highest Conc.	N/A	Neighborhood	SLAMS	SA/GMW	1/6	
17-031-0110	Perez	+41.855917 -87.658419	H. Kramer	Source	N/A	Middle	SLAMS	SA/GMW	1/6	YES (1/12 day)
17-119-0010	Granite City	+38.69443831 -90.15395426	Mayco / US Steel	Highest Conc.	Source	Middle	SLAMS	Hi-Vol	1/6	YES (1/12 day)
17-119-0121	Alton	+38.888373 -90.107592	Olin Corporation	Highest Conc.	Source	Middle	SPM	To Be Determined	1/6	

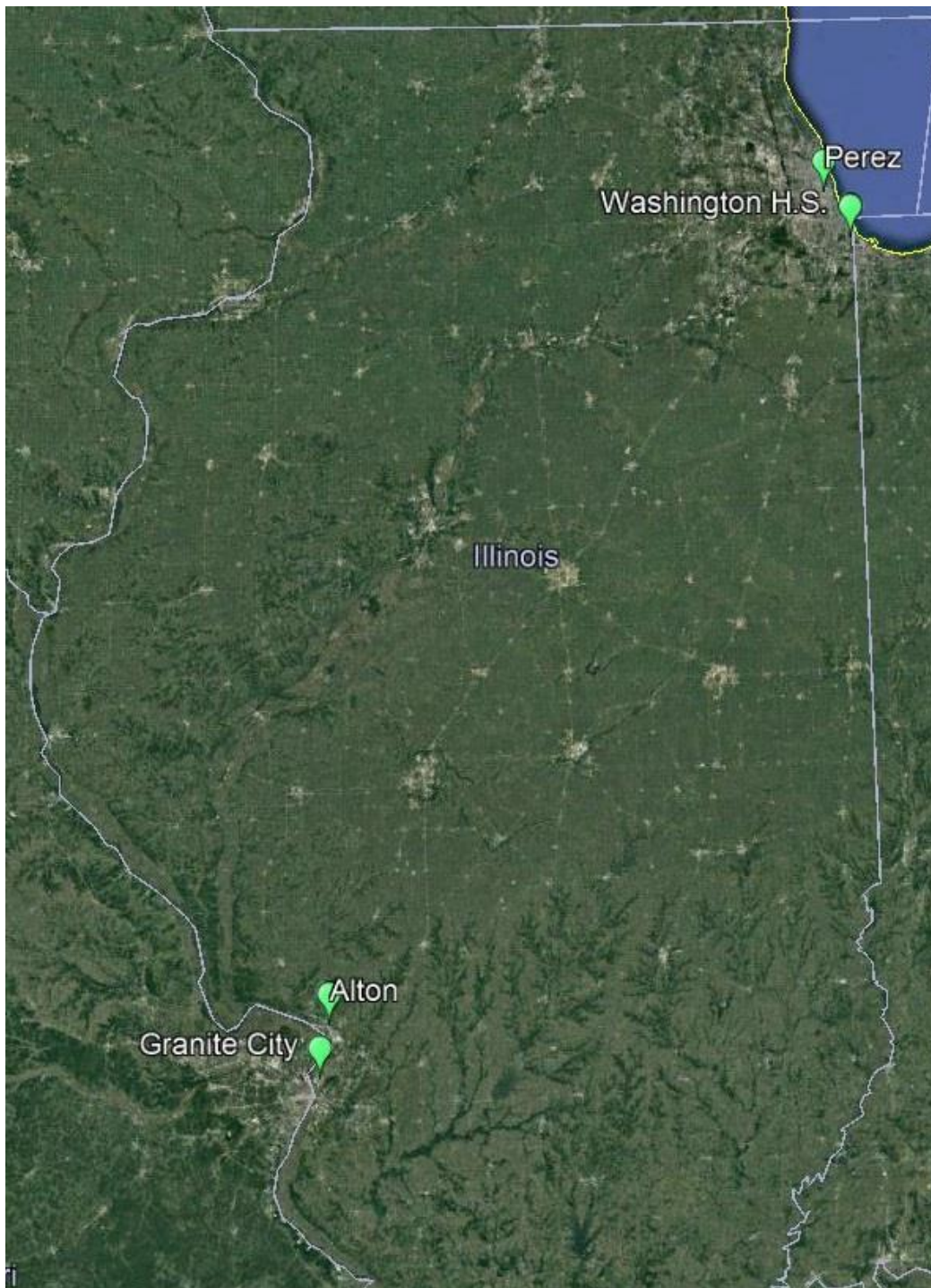
Hi-Vol - Environmental Products Hi-Volume Sampler, Local Conditions (laboratory method 813);

SA/GMW – Sierra Anderson/General Metal Works Hi-Volume Sampler, Local Conditions (laboratory method 043)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 8: Lead Sites – Illinois



Appendix A

Data Requirements Rule SO₂ Emissions Assessment for Illinois Areas Modeled to be in Attainment with the 2010 1-hour SO₂ NAAQS

Background

Pursuant to Section 51.1205(b) of the Data Requirements Rule (DRR) (40 CFR 51 Subpart BB), Illinois EPA is required to submit an annual report to the Regional Administrator that documents the annual SO₂ emissions of each applicable source in each area previously modeled to be attaining the 2010 1-hour SO₂ NAAQS. This report is to be submitted to the Regional Administrator by July 1 of each year and must provide an assessment of the cause of any emissions increases from the previous year and a recommendation regarding the need for additional modeling to determine if the areas are still meeting the 1-hour SO₂ NAAQS.

Multiple areas in Illinois have been designated by USEPA as attaining the 1-hour SO₂ NAAQS, based upon a technical analysis by USEPA that considered, in part, modeling results submitted by Illinois EPA pursuant to the DRR or the 2015 SO₂ Consent Decree. Six of the attainment areas have both active applicable DRR sources and model design values greater than 50% of the 1-hour SO₂ NAAQS (see Table A-1). These six areas are still subject to the ongoing data requirements listed under Section 51.1205(b).

Table A-1: SO₂ Attainment/Unclassifiable Areas in Illinois Subject to Ongoing Data Requirements Pursuant to Section 51.1205(b)

Attainment/Unclassifiable Area	Applicable Source(s)	Modeled Period	Model Design Value	Percent of 1-hour SO₂ NAAQS*
Jasper County	Newton Power Station	2012-2014	138.89 ug/m ³	70.75%
Massac County	Joppa Power Station	2012-2014	168.29 ug/m ³	85.72%
Crawford County	Rain CII Carbon	2015-2017	118.2 ug/m ³	60.21%
Lake County	Midwest Generation LLC -Waukegan	2013-2015	98.91 ug/m ³	50.38%
Granite City Area	U.S. Steel-Granite City Works; Gateway Energy & Coke Company	2016-2018	578.83	294.84%
Williamson County	Southern Illinois Power Coop	2013-2015	194.92 ug/m ³	99.29%

*Based on 1-hour SO₂ NAAQS value of 196.32 ug/m³

2014-2020 SO₂ Emission Trends Data and Recommendations

Table A-2 presents the annual SO₂ emissions data for the applicable attainment/unclassifiable areas for the period 2014 through 2020. Annual SO₂ emissions are listed for the applicable DRR source in each area, along with all the background sources that were included in the DRR and SO₂ Consent Decree modeling.

USEPA's implementation of the primary SO₂ NAAQS occurred in phases and continues with ongoing annual emissions assessment requirements. As a result, progressively more recent years of emissions data have been used in modeling demonstrations that have been the basis of some area designations and in verification modeling. The year with the maximum annual emissions in each three-year modeled period was determined for each area and then compared with the area emission totals for 2020. These data were then compared with USEPA's recommended guidelines for additional modeling presented in the Preamble to the DRR (80 FR 51052). Emissions data for 2012-2014 were used in the SO₂ Consent Decree modeling, whereas emissions data for 2013-2015 were used in the DRR modeling. The Crawford County area modeling was updated using emissions data for 2015-2017 due to the 2017 emissions increase. The Granite City area modeling was updated using emissions data for 2016-2018 due to the 2018 emissions increase. The results of these analyses are presented below:

Jasper County – The highest modeled annual SO₂ emissions total for the Jasper County attainment/unclassifiable area was 16,533.83 tons, which occurred in 2012. Emissions from the Newton Power Station, the only applicable SO₂ source for this area, decreased to 4,632.20 tons in 2020 (-72.0%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Jasper County attainment/unclassifiable area at this time.

Massac County – The highest modeled annual SO₂ emissions total for the Massac County attainment/unclassifiable area was 48,599.45 tons, which occurred in 2014. Emissions from SO₂ sources in the area decreased to 17,536.30 tons in 2020 (-63.9%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Massac County attainment/unclassifiable area at this time.

Crawford County – The highest modeled annual SO₂ emissions total for the Crawford County attainment/unclassifiable area was 9,625.37 tons, which occurred in 2017. Emissions from SO₂ sources in the area decreased to 5,793.68 tons in 2020 (-39.8%). Given the emission decreases in 2020, Illinois EPA recommends no additional modeling for the Crawford County attainment/unclassifiable area at this time.

Lake County – The highest modeled annual SO₂ emissions total for the Lake County attainment/unclassifiable area was 9,205.90 tons, which occurred in 2013. Emissions from SO₂ sources in the area decreased to 612.68 tons in 2020 (-93.3%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Lake County attainment/unclassifiable area at this time.

Granite City Area – The highest modeled annual SO₂ emissions total for the Granite City attainment/unclassifiable area was 2,995.99 tons, which occurred in 2018. Emissions from SO₂

sources in the area decreased to 1,444.19 tons in 2020 (-51.8%). Given the emissions decrease in 2020, Illinois EPA recommends that no additional modeling be performed for the Granite City attainment/unclassifiable area at this time.

Williamson County – The highest modeled annual SO₂ emissions total for the Williamson County attainment/unclassifiable area was 8,651.60 tons, which occurred in 2014. Emissions from SO₂ sources in the area decreased to 2,927.42 tons in 2020 (-66.2%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Williamson County attainment/unclassifiable area at this time.

Table A-2: Annual SO₂ Emissions Data for Attainment/Unclassifiable Areas

ID Number	Facility Name	2014 Emissions	2015 Emissions	2016 Emissions	2017 Emissions	2018 Emissions	2019 Emissions	2020 Emissions	Modeled Maximum	2020 Area Total
079808AAA	Newton Power Station	16,372.76	12,805.40	7,742.70	4,873.20	4,638.60	5,000.30	4,632.20	16,533.83	4,632.20
127855AAC	Joppa Power Station	18,229.24	13,230.00	7,634.00	10,310.20	11,968.40	10,436.10	8,243.00	48,599.45	17,536.30
127855AAA	Holcim US Inc.	491.65	259.42	698.18	409.31	332.38	208.59	268.70		
127899AAA	Midwest Electric Power Inc. (MEPI)	0.00	0.01	0.01	0.02	0.01	0.03	0.10		
127855AAB	Trunkline Gas Company	0.866	0.60	0.20	0.12	0.12	0.18	0.10		
127854AAD	Honeywell International Inc.	143.15	147.30	148.89	100.60	0.04	0.00	0.00		
2114500006	TVA – Shawnee Power Plant	29,734.54	24,301.80	<i>23,807.80</i>	<i>20,494.00</i>	<i>15,149.50</i>	<i>16,345.70</i>	<i>9,024.40</i>		
033025AAJ	Rain CII Carbon	3,134.10	2,161.40	3,836.20	6,810.10	4,162.60	5,451.60	4,067.00	9,625.37	5,793.68
033808AAB	Marathon Petroleum	207.10	213.40	262.22	177.17	114.07	146.16	138.78		
1815300005	Merom Generating Station	3,315.90	2,579.40	<i>3,143.80</i>	<i>2,638.10</i>	<i>3,802.70</i>	<i>2,897.90</i>	<i>1,587.90</i>		
097190AAC	Midwest Generation LLC – Waukegan	5,792.40	2,339.30	2,733.95	1,705.94	1,173.77	754.15	416.40	9,205.90	612.68
097190AAP	New NGC Inc.	8.70	8.70	7.72	0.13	0.12	0.13	0.13		
097025AAR	Countryside Genco LLC	53.10	41.50	19.43	41.85	50.73	51.76	43.00		
097806AAG	Countryside Landfill	6.30	14.50	30.90	21.80	17.20	16.20	37.50		
097809AAD	Abbott Laboratories	22.80	0.20	0.32	0.31	0.31	0.31	0.31		
097125AAA	AbbVie Inc.	16.20	6.60	12.35	1.50	1.57	0.40	0.36		
097200AAV	ADS Zion Landfill Inc.	28.40	26.70	23.40	32.87	47.80	81.83	98.09		
097200ABC	Bio Energy (Illinois) LLC	24.70	22.30	15.10	21.60	25.30	32.54	16.89		
230006260	Pleasant Prairie Generating Station	1,310.10	1,335.50	<i>1,087.00</i>	<i>931.00</i>	<i>258.30</i>	<i>Shutdown</i>	<i>Shutdown</i>		
119813AAI	U.S. Steel – Granite City Works	961.30	828.30	9.94	12.10	350.30	418.67	375.25	2,995.99	1,444.19
119040ATN	Gateway Energy & Coke	1,240.60	1,187.70	1,190.74	1,470.37	2,542.82	1,171.37	976.71		
119465AAG	Green Plains Madison LLC	7.90	7.80	3.10	1.96	1.72	0.96	0.60		
119040AAC	Amsted Rail Co. Inc.	5.20	5.90	4.00	3.50	5.10	4.00	1.00		
163121AAB	Afton Chemicals	96.70	98.00	72.97	73.78	71.18	73.40	58.02		
163050AAD	Milam Recycling & Disposal	28.90	17.50	7.35	15.98	24.10	32.87	31.85		
119801AAK	Chain of Rocks Recycling & Disposal	4.70	4.80	4.81	4.66	0.77	0.80	0.76		
199856AAC	Southern Illinois Power Coop	8,651.60	4,233.60	3,699.20	3,830.80	5,112.70	5,843.70	2,927.40	8,651.62	2,927.42
199862AAD	United States Penitentiary	0.02	0.01	0.02	0.02	0.02	0.02	0.02		

Source: Illinois EPA Annual Emissions Reports, except for those values listed in *red italics*, which were obtained from USEPA's Clean Air Markets database